

FENG et al  
Appl. No. 10/810,856  
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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (currently amended). A method of stabilizing adherence of a ceramic layer to a bond coat of a TBC system, said method consisting essentially of:

incorporating silicon into the bond coat;

maintaining cobalt present in said bond coat at a level of 1-5 wt%; and

maintaining yttrium present in said bond coat at a level of 0.1-8 wt%.

2 (previously presented). A method of stabilizing adherence of a ceramic layer to a bond coat of a TBC system wherein said bond coat comprises MCoCrAlY, wherein M is selected from the group consisting of nickel, iron and mixtures thereof, said method consisting essentially of incorporating silicon into the bond coat, wherein said Co is present at a level of 1-5 wt% and said Y is present at a level of 0.1-8 wt%.

3 (original). A method according to claim 1 wherein chromium is present in an amount of 3-40 wt%.

4 (original). A method according to claim 1 wherein chromium is present in an amount of 5-30 wt%.

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5 (original). A method according to claim 1 wherein aluminum is present in an amount of 3-30 wt%.

6 (original). A method according to claim 1 wherein aluminum is present in an amount of 5-20 wt%.

7 (canceled).

8 (original). A method according to claim 1 wherein yttrium is present in an amount of 0.1-5 wt%.

9 (original). A method according to claim 1 wherein silicon is present in an amount of 0.3-5.0 wt%.

10 (original). A method according to claim 1 wherein silicon is present in an amount of 0.5-4.0 wt%.

11 (previously presented). A method according to claim 1 wherein cobalt is present in an amount of 1-3 wt%.

12 (previously presented). A method according to claim 11 wherein cobalt is present in an amount of 1 wt%.

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13 (original). A method according to claim 1 wherein nickel is present in an amount of 15-45 wt%.

14 (original). A method according to claim 1 wherein nickel is present in an amount of 20-40 wt%.

15 (previously presented). A gas turbine component comprising a TBC system having a metallic bond coat and a ceramic layer, said bond coat consisting essentially of silicon, and cobalt at a level of 1-5 wt% and yttrium at a level of 0.1-8 wt%.

16 (previously presented). A gas turbine component according to claim 15, wherein said silicon is present in an amount of 0.5-5 wt%.

17 (previously presented). A gas turbine component according to claim 15, wherein said cobalt is present in an amount of 1 to 3 wt%.